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BEFORE THE ARIZONA CORPORATION COMMISSION

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MAY 30 2017

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IN THE MATTER OF THE APPLICATION  
OF  
**ARIZONA PUBLIC SERVICE COMPANY**  
FOR A HEARING TO DETERMINE THE  
FAIR VALUE OF THE UTILITY PROPERTY  
OF THE COMPANY FOR **RATEMAKING**  
PURPOSES, TO FIX A JUST AND  
REASONABLE **RATE** OF RETURN  
THEREON, [AND] TO APPROVE **RATE**  
**SCHEDULES** DESIGNED TO DEVELOP  
SUCH RETURN.

(Teena Jibilian, Hearing Officer)

**DOCKET NO. E-01345A-16-0036**

**INTERVENOR GAYER'S**

***REBUTTAL***

**POST-HEARING BRIEF**

IN THE MATTER OF FUEL AND  
PURCHASED POWER PROCUREMENT  
AUDITS FOR ARIZONA PUBLIC SERVICE  
COMPANY.

**DOCKET NO. E-01345A-16-0123**

Richard Gayer, an Intervenor herein, hereby submits his *Rebuttal* Post-Hearing Brief pursuant to oral instructions from Judge Jibilian. He will oppose APS's contentions while supporting those of Attorney Albert Acken for The Districts and Attorney Jay Moyes for Electrical District 8 and McMullen Valley Water District. References to APS's Initial Post-Hearing Brief will be by page:line-line and will be preceded by simpler references such as "Initial Brief" and "APS's Initial Brief", or even simply "Brief".

APS's argument is best characterized as a series of self-serving, conclusory and aggravated non-sequiturs.

Preliminarily, we must recognize that the AMI system with over one million meters in an open wireless network is an insidious progress trap from which all of us including APS must escape before it is too late. A simple progress trap to understand is over-fishing. As soon as the



1 fishermen and other observers notice that the catch is decreasing annually, they can agree to  
2 limit their individual catches until the fish can reproduce fast enough to keep up with human  
3 demand. From such a trap, recovery was both simple and easy (once human beings decided to  
4 cooperate).

5 A more dangerous trap is the air pollution caused by motor vehicle emissions. Trying to  
6 reduce total miles driven or number of vehicles on the road will not work because goods must be  
7 transported to market and people must get to the places of their employment and recreation. The  
8 solution was costly, because emission control devices had to be designed and installed on cars,  
9 and that caused vehicle prices to rise. Still, the solution was relatively straight-forward, and the  
10 atmosphere in the United States has largely recovered from the pollution.

11 Jumping ahead a few decades, we now face a very sophisticated progress trap from  
12 millions of world-wide interconnected computers, many of which are part of *open air* wireless  
13 networks, such as APS's AMI system. The problem here is that the first APS system failure  
14 may come suddenly and destroy substations and power plants by cascading waves of ever  
15 increasing power surges before the destruction from the trap can be stopped.<sup>1</sup> Millions of people  
16 will be without power for weeks if not longer, and the sudden impact on our economy will be a  
17 crippling disaster approaching that of a nuclear war or asteroid strike.

18 APS has already been given notice of the pending disaster by the failures of tens of  
19 thousands of AMI meters (APS's Response to Woodward's Data Request 2.12(d), Gayer's  
20 Exhibit 15), and a significant number of house fires have been associated with those meters,  
21 whether or not caused by the meters themselves. APS must heed the foregoing warnings before  
22 its business is ruined, along with the lives of its 1.2 million customers. See APS's Initial Brief  
23 at 43:16 to 44:5.

24 In 2011, James Woolsey, a former Director of the CIA, said this about smart meters  
25 (taken from YouTube):

26 "Q: Are you saying also on a federal level there is no one in charge of cyber security, policy and  
27 defense.

28 <sup>1</sup> The terrorist or other hacker can cycle customers' power on and off at a critical rate, causing the power  
surges to increase exponentially.



1 A: There is no one in charge of security for the grid, whether its cyber or transformers or  
whatever. You can search forever thru the Federal Code to try to find who that person might be.

2 Q: You think it should be the President?

3 A: Well I think it's -- there is a very good reason for it perhaps to be the Chairman of the, of  
FERC. Or, but to try out to see what would work, I think having the Defense Department work with the  
local utility is the best.

4 What they're doing now, they're constructing what they call a smart grid and they're going to  
make it easier for you and me to call our homes on our cell phone and turn down our air conditioning on  
5 a hot afternoon if we're not there. Great!

6 But that may well mean that a hacker in Shanghai with his cell phone can do the same thing or  
worse. And, a so-called smart grid that is as vulnerable as what we've got is not smart at all. It's a  
really, really stupid grid."

7  
8 On March 20, 2015, KPHO-TV, Channel 5 in Phoenix, broadcast a short news item about  
9 cyber risks of with smart meters, available at Gayer's Blog as [www.dickgayer.com](http://www.dickgayer.com) under Menu  
10 Item "Smart Meters Subject To Hacking – KPHO-TV". (See also *post* under I(A), "Security  
11 and Privacy" at page 5:3-9).

12  
13 I. APS's AMI OPT-OUT PROPOSAL HARMS THE PUBLIC AS WELL AS NON-  
14 AMI CUSTOMERS.

15 APS strives in vain to persuade us that the AMI "benefits AP customers in numerous  
16 ways" (Initial Brief a 45:4 to 46:6), relying almost solely upon the testimony of its employee  
17 Bordenkircher. The data available to consumers are<sup>2</sup> at least one day old and lack sufficient  
18 detail to be useful to a customer, and Bordenkircher's homey tale regarding his family's chats  
19 about that stale data is just another anecdote.

20 Bordenkircher's comments on the ease of connecting and disconnecting power is both  
21 deceptive and dangerous. During the hearings, he admitted that the actions of just one APS  
22 employee can disconnect a customer's power without the safety and security of requiring at least  
23 two employees to act together to put a customer in the dark. After rambling on for almost one  
24 page (Tr. at 602:1-21), he finally admits that "a single customer service rep can issue a  
25 disconnect order" (Tr. at 603 2-4). Regarding power quality, Bordenkircher displayed his  
26 ignorance for all to hear, stating that his knowledge of that subject was limited to voltage and  
27

28 <sup>2</sup> "Data" are plural; datum is the singular version.



1 nothing else: "Power quality relates to voltage" (Tr. at 662:14-15). He displayed additional  
2 ignorance by admitting that "I can't define harmonics" (*id.*, at 24) and that "I cannot define  
3 transients"<sup>3</sup> (Tr. 663:2). He also is unaware of conducted emissions. (Tr. at 743:21-22.) Power  
4 quality includes many parameters, including harmonics and transients; see excerpt at p. 10, *post.*

5 APS attempts to create a diversion by falsely claiming that Woodward's and Gayer's  
6 arguments "fundamentally concern AMI itself, not the opt-out program" (Initial Brief at 46:11-  
7 12). This Intervenor's arguments relate to simple methods of mitigating the impact of extra  
8 charges upon non-AMI customers: spreading meter reading costs among all 1.2 million APS  
9 customers at less than 21 cents per month per customer (Gayer Exhibit 17), self-reporting under  
10 Rule 14-2-209 (A)(1-5) of the Arizona Administrative Rules, and bill estimation as suggested  
11 directly to "Richard Gayer" in Decision No. 75752 at ¶ 36 (p.9:26 to p.10:2) in Docket No. 15-  
12 0386. APS simply ignores Gayer's specific proposals.

13 APS under five subdivisions then addresses intervenor's arguments relating to privacy  
14 (A), fires (B), health (C), purported AMI benefits (D) and discrimination in violation of A.R.S.  
15 §40-334 (E). See APS's Initial Brief at 47:4 to 51:7; this Brief does not address "DG  
16 Customers", Initial Brief at 51:8 to 52:7.

17 (A) Security and Privacy. The actual collection of unnecessary data by APS is the real  
18 problem. See "Data is [sic] priceless; that's why some apps sell it". Arizona Republic, May 27,  
19 2017 at page 15A (top). That mountain of data is valuable to commercial companies, but  
20 Bordenkircher seems to be unaware of that. (Tr. at 641:22-25.) APS may suggest that any data  
21 transferred outside of APS would be made totally anonymous, but that is woefully inadequate  
22 even if possible. Such transfers of data amount to theft of a customer's property, a tort if not a  
23 crime, because APS is not paying the customer for it and is acting without even attempting to  
24 obtain the customer's consent.

25 Worse yet, a non-AMI customer with a digital meter would face ever greater abuse, since  
26 APS has no need to read personal data from such a customer's meter.

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27  
28 <sup>3</sup> Transcript has "transience".



1 APS relies solely upon Bordenkircher's testimony on security (Brief at 47:26-28 and  
2 48:25-26 [footnotes], but ignores the statement of Brady Willis of Cyberscape, the expert  
3 witness presented by KPHO-TV News on March 20, 2015: "[Willis] Anybody with a moderate  
4 amount of security of computer knowledge could accomplish what was done there. [Reiser]  
5 Cyber security expert Brady Willis is speaking of incidents where smart meters have been  
6 hacked." See [www.dickgayer.com](http://www.dickgayer.com) under "Smart Meters Subject to Hacking – KPHO-TV" for  
7 the full two minutes of that broadcast.

8 *(B) House Fires.* APS's loyal witness, Scott Bordenkircher, again defends his employer.  
9 (Tr. at 637:6 to 693:11.) He begins by firmly blaming customer equipment for the fires:  
10 "[Gayer] APS's position is that the condition of the contacts, meter contacts and the customer's  
11 meter box are the responsibility of the customer, not APS, is that correct? [Bordenkircher] my  
12 understanding is yes" (Tr. 637:9-16). That is, APS claims zero responsibility for the contacts.

13 "You gotta be kidding!" The customer has no control of those contacts, since no  
14 customer may remove his or her meter even temporarily to have an electrician inspect the  
15 contacts. (Tr. at 637:17-21.) Mister Bordenkircher lacks knowledge about procedures regarding  
16 contact inspection (Tr. at 638:20-25), and lacks even more knowledge about a suitable witness  
17 on that subject. (Tr. at 639:7-11).

18 APS claims that in fires that involved meters, "it has been determined that something  
19 other than the meters causes the fires", relying again on Bordenkircher. (Brief at 48:1-2.)  
20 According to APS, in not even *one* fire was a meter even partly to blame. "It has been  
21 determined" indeed; again, it has been determined, as usual, by Bordenkircher. Unbelievable!  
22 Suffice it to say that one fire that is somehow related to a smart meter is one too many; analog  
23 meters do not catch on fire.

24 *(C) Health & Safety Regulations.* Gayer supports the work of Intervenor Warren  
25 Woodward on this topic. APS relies upon FCC regulations and the Arizona Department of  
26 Health Services (Brief at 48:22 to 49:7) to defend itself, but they cover only a small part of this  
27 subject. The FCC also regulates conducted emissions (FCC Code of Federal Regulations Title  
28 47, Part 15, Subpart C, Section 15.207 (Power Line Conducted Emissions) and ANSI C63.4



1 sections 6 and 7), and the ADHS study found only that smart meters “were not likely to harm  
2 public health” (Brief at 49:7), not that smart meters are actually safe.

3 (D) *Do Benefits of APS’s AMI Meters **Outweigh** Costs?* (Brief at 49:8-22.) Surprisingly,  
4 APS finally admits that its new meters do have real costs, so much so that the alleged benefits of  
5 the meters must be *balanced* against the costs. Gayer submits that the most powerful entity  
6 among the parties, APS, should bear the burden of persuasion on this issue. APS fails to  
7 discuss burden, but it appears from its Responses to Data Requests that APS has clearly  
8 assumed this burden for itself. APS discusses only financial costs; it utterly disregards the well-  
9 being of its customers who are at the mercy of APS equipment, including smart meters.  
10 Therefore, APS has failed to discharge its burden on this issue.

11 (E) *Settlement Agreement Opt-Out and Discrimination.* Gayer bases his argument here  
12 on ARS §40-334, and APS defends that its discrimination is “reasonable” within the meaning of  
13 that statute. (Brief at 50:7 to 51:7.) “The law permits utilities to establish ‘reasonable’  
14 differences as to rate and charges.” (*Id.*, at 50:10-12.) Thus, APS admits to discriminating but  
15 claims that it is acting lawfully.

16 But APS fails to address a fair and equitable alternative to the proposed five dollar  
17 monthly charge for reading non-AMI meters. Gayer suggests spreading the cost of such  
18 readings among all 1.2 million APS customers. Spreading would add only 20.7 cents to each  
19 customer’s monthly bill, including the bills of non-AMI customers. (See Gayer’s Exhibit 17, in  
20 which he uses only APS’s own estimate of \$15 for the meter reading cost.) He submits that not  
21 even a low-income customer on the e-3 plan would object to the added pocket change,  
22 especially since many of those customers may want a safe (non-AMI) electric meter but would  
23 be strained to pay five dollars more every month for electricity.

24 APS has failed to consider its potential income from selling the customer data it obtains  
25 from digital and AMI meters. Bordenkircher claimed ignorance of any sales (Tr. at 41: 22-25),  
26  
27  
28



1 but even if these data are not being sold at present, they could be sold in the future and applied  
2 to reduce the cost of meter reading.<sup>4</sup>

3 Finally, APS contends that “timely energy usage and demand information” is important  
4 to customers (Brief at 51:18-22), but they continue to hide the fact that such information is a day  
5 or more old and that fresher information can be obtained simply by reading one’s meter,  
6 especially since a digital meter display, unlike an analog meter with five dials, can easily be read  
7 by almost anyone.

8  
9 II. THE SETTLEMENT PROCESS WAS HARDLY “FAIR AND INCLUSIVE”; OPEN  
10 LITIGATION IS THE ONLY PROCESS THAT CAN SERVE THE PUBLIC INTEREST.

11 APS presents the Settlement Agreement as the only foundation or basis for the ROO.  
12 That is, we go from Data Requests to Direct Testimony to Settlement Meetings to a Settlement  
13 Agreement to more Direct Testimony but now *on the Settlement Agreement* and to Hearings ---  
14 *on the Agreement and nothing else* --- and then to Post-Hearing Briefs and finally to the ROO.  
15 In recent rate cases, probably for the last ten years, the Commission’s Decision and Order has  
16 become a mere formality. Such a procedure cannot be fair, and it admittedly was not open  
17 because the public and the press were excluded.

18 APS argues without foundation that “a litigated outcome” usually “results in a binary,  
19 win/lose conclusion” (Brief at 52:10-13), but ignores something that every litigating attorney  
20 knows: civil verdicts and judgments, especially in complex cases, commonly result in balanced  
21 outcomes. One party wins on some issues and the opposing party (or parties) win(s) on others.  
22 Rate Cases are in no way comparable to car accident cases. And unlike private settlement  
23 conferences conducted by the ACC, litigation is by law open to the public and the press.

24 APS flatly states that “Mr. Abinah [,] led the settlement discussions” (Brief at 53:2), but  
25 that is a stretch. Initially, Mr. Abinah seemed like a deer in the headlights, so lost and  
26 wandering that Barbara Lockwood was actually *required* to take over for a couple of sessions.<sup>5</sup>

27  
28 <sup>4</sup> Gayer is **strongly** opposed to APS’s selling even anonymous customer data without compensation, but  
APS claims ownership of those data and has not yet been challenged on that issue.



1 Director Abinah certainly *did* allow everyone to speak and to do so *ad nauseum*, but most of the  
2 speech was meaningless because while APS had only one signature, it effectively had more  
3 votes than those of all the Intervenor combined. APS has excess power because it also has  
4 excess money, and it gets all of that money from its customers. "Q. Now, is it fair to say then  
5 that essentially all of APS's money eventually comes from customers? A. Yes". Testimony of  
6 APS Witness Leland Snook (Tr. at 827:16-18).

7 APS quotes from several Intervenor who describe the settlement talks with words like  
8 "open", "fair manner", "inclusive", "opportunity" and even "transparent". (Brief at 53-54.)  
9 First, it is clear that no part of the talks were "transparent", since no member of the public or the  
10 press was permitted to attend and no one in attendance was permitted to discuss the contents of  
11 the talks with outsiders. But no amount of openness, fairness, inclusiveness or opportunity to  
12 speak can constitute due process when the most powerful listeners' ears are closed.

13 Director Abinah strove mightily to achieve due process, but the cards were so heavily  
14 stacked against him that his efforts in this regard were futile. Any ROO that results from this  
15 process should be deleted from all electronic storage devices and burned if in paper form.

16  
17 Support for Albert Acken and Jay Moyes

18 For the foregoing reasons, Gayer agrees with and supports the requests of Attorney  
19 Albert Acken for "The Districts" and Attorney Jay Moyes for Electrical District 8 and  
20 McMullen Valley Water District for a complete redo of this rate case. Acken concluded that  
21 "The Districts respectfully request that the Commission deny the proposed, no-unanimous  
22 settlement so that an open, fair evidentiary hearing can be held to fully vet APS's application".  
23 (Closing Brief in Opposition to Settlement at 6:4-7.); Moyes similarly concluded that "ED8 and  
24 McMullen therefore maintain that the settlement agreement should be rejected and this matter be  
25 opened for a full evidentiary proceeding on the merits." (Post-Hearing Brief of District Number  
26 Eight and McMullen Valley Water District at 11:19-21.)

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27  
28 <sup>5</sup> That was highly improper because she represents the Applicant, but I am personally glad that she did  
so. Otherwise, all of us would still be there in settlement talks!



1 CONCLUSION

2 For the foregoing reasons, both the eventual ROO and the Commissioner's eventual  
3 Decision and Order should reflect the following points:

4 1. The Settlement Negotiations and the Resulting Settlement Agreement constitute  
5 serious violations of procedural Due Process, so that all Settlement and Hearing procedures that  
6 occurred in this rate case to date must be set aside and be declared null and void. Based only  
7 upon the Responses to Data Requests and pre-hearing Direct Testimony and Rebuttal  
8 Testimony, this case shall be fully litigated openly in public for all to witness and to participate  
9 as is reasonable. The ROO shall be based only on the former and in no way shall be influenced  
10 by meetings or discussions or anything else that does not occur in public during the hearings.

11 *If this Rate Case does continue as planned, then the following provisions shall apply.*

12 2. The costs of reading non-AMI meters shall be spread among all 1.2 million APS  
13 customers;

14 2.1 If the cost of reading non-AMI meters is not spread as stated in 2, above, then such  
15 customers shall be allowed to submit a self-reading of their meters to APS every month;

16 2.2 If the cost of reading non-AMI meters is not spread as stated in 2, then APS shall  
17 apply bill estimation to non-AMI Customers;

18 3. If a non-AMI meter has been read by APS in the past without entering on a customer's  
19 property (say, by using binoculars from a convenient location), then APS shall not be permitted  
20 to have physical access to that meter or its replacement for reading purposes;

21 4. New customers shall be allowed to choose among any rate for which they qualify  
22 when they become a new customer and shall not be required to suffer a 90-day period or any  
23 other period on a time-based rate such as TOU or TOU with Demand;

24 4.1 If the Commission approves the 90-day waiting period, then new customers shall be  
25 informed of their options sufficiently before the 90-days have passed so that their newly chosen  
26 rate will be effective on the date that the 90-day period expires;

27 5. Smart (AMI) Meters are potentially dangerous devices; APS shall not install any  
28 more or replace any of them with another AMI meter until APS by evidence establishes that



1 AMI meters are actually safe and do not expose any customer to potentially harmful radiation, to  
2 a cyber attack that may disconnect his or her power, or to a house fire that originates inside of  
3 the meter or that involves the meter's contacts with a customer's service entrance panel.

4 6. If the Commission Orders AZ Sun II to go forward, then the cost of reading non-AMI  
5 meters shall be spread among all 1.2 million APS customers. (This item is included here in the  
6 event that the ACALJ or the Commission has tentatively decided against such cost spreading  
7 when it was considered as a separate item that had not yet been related to AZ Sun II.)  
8

9 Dated: 30 May 2017

Respectfully submitted by,



RICHARD GAYER, Intervenor  
526 West Wilshire Drive  
Phoenix, AZ 85003  
602-229-8954 (rgayer@cox.net)

13 **Proof of Service**

14 On 30 May 2017, I served copies of the foregoing on all parties on the "Service List"  
15 in this case.

16 Dated: 30 May 2017



RICHARD GAYER

18 **Excerpt on Power Quality from a Leading Technical Journal, at Page 2**

19 **International Journal of Advances in Engineering & Technology, May 2011.**

20 **©IJAET ISSN: 2231-1963**

21 **2 Vol. 1, Issue 2, pp.1-11**

22 The commonly used terms those describe the parameters of electrical power that  
23 describe or measure power quality are Voltage sags, Voltage variations, Interruptions Swells,  
24 Brownouts, Blackouts, Voltage imbalance, Distortion, Harmonics, Harmonic resonance,  
25 Interharmonics, Notching, Noise, Impulse, Spikes (Voltage), Ground noise, Common mode  
26 noise, Critical load, Crest factor, Electromagnetic compatibility, Dropout, Fault, Flicker, Ground,  
27 Raw power, Clean ground, Ground loops, Voltage fluctuations, Transient, Dirty power,  
28 Momentary interruption, Over voltage, Under voltage, Nonlinear load, THD, Triplens, Voltage  
dip, Voltage regulation, Blink, Oscillatory transient etc [4,6,14,18,19].